

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL SCIENCE CENTER 701 MAPES ROAD FORT MEADE, MD 20755-5350





DATE

December 28, 2000

SUBJECT:

Region III Data QA Review

FROM

Fredrick Foreman'

Region III ESAT RPO (3ES20)

TO

Christine Wagner

Regional Project Manager (3HS31)

Attached is the organic data validation report for the Abemarle Dump #2 site (Case #: 28712, SDG#: C03S1) completed by the Region III Environmental Services Assistance Team (ESAT) contractor under the direction of Region III ESD.

The format of this validation report has changed. It will no longer include copies of the CLP forms. This change was driven in part by a need to reduce the amount of paper utilized. I will continue to retain copies of the CLP forms and they will be available upon request.

If you have any questions regarding this review, please call me at (410) 305-2629.

Attachments

RAI)

WA File: 0300402

TDF#: 1240

OFFICE OF ANALYTICAL SERVICES AND QUALITY ASSURANCE



Lockheed Martin Environmental Services
US EPA Environmental Science Center
701 Mapes Road Ft. Meade, MD 20755-5350
Telephone 410-305-3037 Facsimile 410-305-3597

LOCKHEED MARTIN

DATE:

December 26, 2000

SUBJECT:

Level M2 Organic Data Validation for Case 28712

SDG: C03S1

Site: Albemarle Dump #2

FROM:

"non responsive based on revised scope

Senior Data Reviewer

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Senior Oversight Chemist

TO:

Fredrick Foreman

ESAT Regional Project Officer

OVERVIEW

Case 28712, Sample Delivery Group (SDG) C03S1, consisted of seven (7) aqueous samples submitted to Laucks Testing Laboratories (LAUCKS) for volatile, semivolatile and/or pesticide/PCB analyses. Sample set included one (1) trip blank which was analyzed for volatiles only. Samples were analyzed according to Contract Laboratory Program (CLP) Statement of Work (SOW) OLM04.2 through the Routine Analysis Services (RAS) program.

SUMMARY

Data were validated according to Region III Modifications to the National Functional Guidelines for Organic Data Review, Level M3. All samples were successfully analyzed for all target compounds.

MINOR PROBLEM

Several volatile and semivolatile target compounds failed precision criteria [Percent Relative Standard Deviation (%RSD) and/or Percent Difference (%D)] in initial or continuing calibrations. No positive result was associated with these compounds. Quantitation limits for dichlorofluoromethane which had a continuing calibration percent difference greater than fifty percent (%D>50%) were qualified "UJ" in affected samples.

NOTES

The maximum concentrations of all target compounds found in the analyses of trip, storage and
method blanks are listed below. No sample reported positive results for blank contaminants;
therefore, no data were qualified based on blank contamination. Concentrations are in units of
ug/L.

ORIGINAL (Red)

Compound	Concentration
methylene chloride*	1 7 J
chloroform	33
bromodichloromethane	10
dibromochloromethane	3 J
bromoform	3 Ј
1,2,4-trichlorobenzene	2 J

^{*} common laboratory contaminant

- Pesticide/PCB initial calibrations performed 11/03/2000 indicated %RSDs for alpha-BHC and gamma-BHC outside QC limits on DB5 column and %RSDs for alpha-BHC and 4,4'-DDD outside QC limits on DB608 column. No positive results were associated with any of these calibration outliers; therefore, no data were qualified.
- Compounds detected below Contract Required Quantitation Limits (CRQLs) were qualified "J" on Data Summary Forms (DSFs).
- Tentatively Identified Compounds (TICs) were reviewed during data validation. No reported TICs were identified as blank contaminants or laboratory artifacts.
- A single non-spiked compound, other than blank contaminants, was detected in sample, matrix spike (MS), and matrix spike duplicate (MSD) analyses. Results and precision estimate for acetone are tabled below. Units are ug/L.

•		<u>C03S1</u>	<u>C03S1MS</u>	C03S1MSD	<u>RPD</u>
acetone	•	7 J	ND	4 J	55

RPD = relative percent difference ND = not detected

Matrix Spike/Matrix Spike Duplicate analyses for semivolatile and pesticide/PCB fractions
were not performed by the Laboratory. Laboratory narrative indicates directions relative to
which sample to use for Quality Control analyses were not received from CLASS prior to
expiration of samples' holding time.

All data for Case 28712, SDG C03S1, were reviewed in accordance with Region III Modifications to the National Functional Guidelines for Organic Data Review, September 1994.

ATTACHMENTS

1)	Appendix A	Glossary of Data Qualifier Terms
2)	Appendix B	Data Summary Forms
3)	Appendix C	Tentatively Identified Compounds
4)	Appendix D	Chain of Custody Records
5)	Appendix E	Laboratory Case Narratives

DCN: 28712 C03S1rpt



Appendix A

Glossary of Data Qualifiers



GLOSSARY OF DATA QUALIFIER CODES (ORGANIC)

CODES RELATED TO IDENTIFICATION

(confidence concerning presence or absence of compounds)

U = Not detected. The associated number indicates approximate sample concentration necessary to be detected.

NO CODE = Confirmed identification.

- B = Not detected substantially above the level reported in laboratory or field blanks.
- R = Unusable result. Analyte may or may not be present in the sample. Supporting data necessary to confirm result.
- N = Tentative identification. Consider present. Special methods may be needed to confirm its presence or absence in future sampling efforts.

CODES RELATED TO QUANTITATION

(can be used for both positive results and sample quantitation limits):

- J = Analyte present. Reported value may not be accurate or precise.
- K = Analyte present. Reported value may be biased high. Actual value is expected to be lower.
- L = Analyte present. Reported value may be biased low. Actual value is expected to be higher.
- UJ = Not detected, quantitation limit may be inaccurate or imprecise.
- UL = Not detected, quantitation limit is probably higher.

OTHER CODES

- NJ = Qualitative identification questionable due to poor resolution.

 Presumptively present at approximate quantity.
- Q = No analytical result.

Appendix B

Data Summary Forms

DATA SUMMARY FORM: VOLATILES

Case #: 28712

SDG: C03S1

ALBEMARLE DUMP #2

Site: Lab.:

LAUCKS

Number of Soil Samples: 0 Number of Water Samples: 7

Sample Number:	C03S1		C03S2		C03S3		C03S4		C03S5	
Sampling Location :	STREAM0	STREAM01		2	STREAM03		680BROAD		HIDBROAD	
Field QC:	1									
Matrix:	Water		Water		Water		Water		Water	
Units:	ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :	11/6/00		11/6/00		11/6/00		11/6/00		.11/6/00	
Time Sampled :	12:00		13:45		14:00	·	16:30		17:00	
%Moisture:	NA		N/A		N/A		N/A		N/A	
pH:	<2		<2	:	<2		<2		<2	
Dilution Factor:	1.0		1.0		1.0		1.0	,	1.0	
Volatile Compound CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Dichlorodifluoromethane 10	武海·新疆·	馬牌		UJ	(東海岸)	UJ	Palettate.	'nU.∝	神殿期 为	·UJ÷
Chloromethane 10		144° 1041 °			Later dat have been	0.57.	n er varierning gewent	4-1		
Vinyl Chloride	Maria de la como de la Maria de la como de la			5354	的定式数	77.5% 71.5% 11.5%		- 1:44-51		k u
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1.1-Dichloroethene	是超级处			17.5	ESTATE OF THE SECOND		新发料 的	A Single	16-37 Meno	4
1,1,2-Trichloro-1,2,2-trifluoroethane 10						20.2204.1	All districts of the San	N. W. A. Salar S. C. C.	F 30 F 5 At 3.5 10	■1.400 〒 550 m
Acetone 10	55 - 7 N	J	Briggs, Art This year.	200	地名美国			300年 100日 100日		
Carbon Disulfide 10	1			i, and		er:	· ·	2012-31	CARLA TO ACCUSE	79699 14.
Methyl Acetate	数为 证		A first of the second s				MANAGER S	を を は な な な な よ り に る り た り た り た り た り た り た り た り た り た り	受力理學學	14. Th.
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Methyl tert-Butyl Ether 10		~~~	1,000 at 100 at 1,120 at		Se 19 to service	- Hit-	terstand vysom,		displace yes start.	V. 171 F.
1,1-Dichloroethane		20 m	が、 3倍、20mm と		Ė. S.	Figure 1			展生味:	ē.
cis-1,2-Dichloroethene 10		-14175-2-741			er energy in months all policy for	AM COST 14	To the state of th	\$5 -2 -4B	Special research	
*2-Butanone 10	是这种特征	arman Mari	than the second			100	$\lim_{n\to\infty} L_n(x_n) = 0$	7 a	585 J	377 J
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1,1,1-Trichloroethane	2 2-141	建婚		全	SOUTH		別はまでもよう	$G_{\alpha}^{(i)} = G_{\alpha}$	an effect	
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*Carbon Tetrachloride	要能がある				数记录数	選擇之	Market Control	ğ., <u>Ç.,</u>		12.00
*Benzene 10			,		,	,,				
1,2-Dichloroethane				Service Control			2. 建筑安全 1946年 - 中国	\tilde{t}_{ij}	26. Neses	,1 · · · · · · ·
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*1,2-Dichloropropane 10						1244	N1-3	9 4		
Bromodichloromethane 10		da in da Seide	a	$\frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2} \frac{1}{2}$		Ki.i.i		ė ".		. !
cis-1,3-Dichloropropene 10				··· • 96.		Survey,				
4-Methyl-2-pentanone				Age of		V. 77	Service		4	talina Hara
*Toluene 10	stan routed (CTC)		Concess of			,	7 .		٠.	
trans-1,3 Dichloropropene	the property of the second			5. f · · ;	#71 / 631151 #8142 83 12	3 . 1		1979 (1) 3, 98,71		
1.1.2.Trichlomosthone					-		767.1 V.		- 144 £ 47	
Tetrachloroethene		770		gin agen Africa	875 A OLD LA	The second	現機等型DUC	(2)	k V. Maraka	300

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

DATA SUMMARY FORM: VOLATILES

Case #: 28712 Site :

Láb.:

SDG : C03S1

ALBEMARLE DUMP #2

LAUCKS

Number of Soil Samples: 0 Number of Water Samples: 7

Sample Number :		C03S1		C03S2		C03S3		C03S4		C03S5	
Sampling Location:		STREAMO	ı	STREAMO	2	STREAM03	ı.	680BROAD	,	HIDBROAD	
Field QC:					-		•	المحادث		INDBROAD	•
Matrix:		Water		Water		Water		Water		Water	
Units:		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		11/6/00		11/6/00		11/6/00		11/6/00		11/6/00	
Time Sampled :		12:00		13:45		14:00		16:30		17:00	
%Moisture:		NA		N/A		N/A		NA		N/A	
pH.:		<2		<2			<2		<2		
Dilution Factor :		1.0		1.0		1.0		1.0		<2 1.0	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag		Flag	Result	Flag
2-Hexanone	10	一种 有数数数	数 套		SERVE I	直是他是他	深沙	PER MALL	\$15.5°C	किंदिकी.	0.0 25 01
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*Chlorobenzene	10						31	A PERSON NAMED AND ADDRESS.	33-2 T.		
*Ethylbenzene	10	強迫強	製工		50 A	Militari,	型. 型. 大点				i d i i
Xylenes (total)	10						- 1 15.		,,,,		
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- Isopropylbenzene	10					型計算	露拉				建 学证
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1,3-Dichlorobenzene	10 -		Actor Bogs	新华村				是有意思的		智力發展了	22" 44"
*1,4-Dichlorobenzene	10			V-200 V = - 110	12-12-1	0 4 24 a 1 2900 2	et and	AND CONTRACTOR OF STREET	Spridterin	ar in anymin s	Silvar.
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1,2-Dibromo-3-chloropropane	10			10	n-seri	Contract Contract Builds	Law Alban	arterior constitutions	1.62	State of the second	
1,2,4-Trichlorobenzene	10	最不确地不	Total		Sale	The fact of the fields		群态之:	and the second		

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

Revised 09/99

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

DATA SUMMARY FORM: VOLATILES

Case #: 28712

Site:

SDG: C03S1

ALBEMARLE DUMP #2

Number of Soil Samples: 0 Number of Water Samples: 7

Lab.: LAUCKS

Sample Number.:	C03S6		C03S7							
Sampling Location :	701BROAD)	TRIPBLK		ļ		•			
Field QC:			Trip Blank		İ					
Matrix:	Water		Water							
Units:	ug/L		ug/L		l					
Date Sampled :	11/6/00		11/6/00							
Time Sampled :	17:30		17:30				1			
%Mojsture:	N/A		N/A							
рН	<2		<2 ·							
Dilution Factor:	1.0		1.0				<u>.</u> .			
Volatile Compound CR0	L Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
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Bromomethane 10	•									
Chloroethane	r de la		l.	en del maner		1. 7.		. ·		<u>,</u> %
Trichlorofluoromethane - 10										
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Carbon Disulfide 10		١					l			
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*Methylene Chloride		1	To the second second	PROCESS AND						1
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22-Butanone							10-18-per 1	3		
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1.1.1-Trichloroethane		. 22		- <u>554</u> -5-			影的主任		A-v	
Cyclohexane 10	The land of the Co.		w/ . **		50 5. x : x0:		2	2		
*Carbon Tetrachloride		n 1						2		
*Benzene 10		Z	green.	Messing	Personal ratio	in State of the	Signatura (1.1.1%)	200	5 12 (5 2 1 4)	
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cis-1,3-Dichloropropene		ly de			[]					
4-Methyl-2-pentarione	, , , , , , , , , , , , , , , , , , , ,		l - "							
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trans-1,3-Dichloropropene		A. #			\$13 get		, C <u>.</u>			
1,1,2-Trichloroethane	A ST TO SERVICE TO SERVICE STORY	e	5 1 25 V	 No. 1						
*Tetrachloroethene	問題的意	7.74		· 100		1/5				

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Case #: 28712

SDG: C03S1

Site: Lab.: ALBEMARLE DUMP #2

LAUCKS

Number of Soil Samples: 0

Number of Water Samples: 7



Sample Number :		C03S6		C03S7							
Sampling Location :		701BROAD)	TRIPBLK		İ				l	
Field QC:				Trip Blank		l				l	
Matrix:		Water		Water		l				1	
Units:		ug/L		ug/L		1				1	
Date Sampled :		11/6/00		11/6/00		1				!	
Time Sampled :		17:30		17:30		ŀ				1	
%Moisture:		NA		N/A		l				1	
pH:		<2		<2	-			1	-		
Dilution Factor :		1.0		1.0		l		İ		l	
Volatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2-Hexanone	10 -	斯羅維斯	3 L. J.		54	stant, on his course	201	W. William W. W. Com. S.			ga jegon.
Dibromochloromethane	10			3	·j	1			Jac V.	Selection Selection	
1,2-Dibromoethane	10.	原性。这种语识	發音				TETERATO TOTAL		100	See and the	(Tar.)
*Chlorobenzene	10								l. '		
Ethylbenzene	10	関係が開	F-1			A CONTRACTOR			100 E	間高 pareser of t 直でなって、アビス	g
Xylenes (total)	10	,				1	l			(Ear - Ar)	ľ
Styrene	10				95-46 362 - 3	register:		既計場館	國際		Part of
Bromoform	1 10			3	J		4	minimum in the control of	2.0.5		Carlotte.
Isopropylbenzene	10	验的证		整件核排			陈脸 :	PART PART OF THE P	整辑	能納到	ETE:
1,1,2,2-Tetrachloroethane	10			·			Late of Select		. :	SECTION SINGER	335,472 60
1,3-Dictiorobenzene	10					BEAUTY CONTRACTOR				2000年1000年100日 2000年100日 2000年100日	1353
1,1,2,2-Tetrachloroethane 1,3-Dichlorobenzene 1,4-Dichlorobenzene	10	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			or Discount	W St Lamin P	On House	HALL IN HIS THE PROPERTY	MINISTERNO ST	New Performance of the States	: :
1,2-Oichlorobenzene	÷ 10		经验	製作では当然です。 製作では当場では、	7		4.38		HE S	表现是形 定	E Di
1,2-Dibromo-3-chloropropane	10			sample mann grant (f) Life		Tanto and STAL	emetri et di	amous a todalishe	ABACTER'S	Are well strained.	E. Sendaril
1,2,4-Trichlorobenzene	10	要解析 為	變額	展 整体 2005年1月2日 全有水量的17年1月	अर्गिनेस हो. व	Bern Co.	ng grang Samuel		886	Market Town	100

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Page _5__ of _10___ *OR/G/NAL* /Red/

Case #: 28712

SDG: C03S1

ALBEMARLE DUMP #2

Site : Lab. :

LAUCKS ...

Number of Soil Samples: 0 Number of Water Samples: 6

Sample Number :		C03S1		C03S2		C03S3		C03S4		C03S5	
Sampling Location :		STREAMO	ì	STREAM02	?	STREAM03	,	680BROAD		HIDBROAD)
Field QC:		·						! ·			
Matrix:		Water.		Water		Water	j	Water		Water	
Units:		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		11/6/00		11/6/00		11/6/00		11/6/00		11/6/00	
Time Sampled :		12:00		13:45		14:00		16:30		17:00	
%Moisture:		N/A		N/A		N/A	,	N/A		N/A	
pH:											
Dilution Factor:		1.0	_	1.0		1.0		1.0		1.0	
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	. 10	最高效果	H.J.	際には増り		\$ 30 mar. \$ 1		国际的证	理的		7
Phenol	10					1					1
bis-(2-Chloroethyl) ether	10:.	業 はビス	는 1000 1887년		## 			議論に行			
2-Chlorophenol	10		l			į					1
2-Methylphenol	10		聖	ESTATE AND	變		形式分		脚的		FF.
2,2'-oxybis(1-Chloropropane)	10	1	·								1
Acetophenone	10				型论	是可是是中	SLIT	疆马达过			E 121
4-Methylphenol	10	ingger of the section (Fig.	22 4 5 4		72077A -	grand to the same	lozano:				
N-Nitroso di-n-propylamine	: . 10 _{/e.} .		- 5	The second of th			(1985年) (1986年)		羅沙		ida Albania
Hexachloroethane	10	aka ga kira international projection	ال جائزي.	+4	aum eu	rant i re viale i	on the district	termental and sec. (A 21	la come e
Nitrobenzene	10	XXXX	्राह्म इ.स. ५							2000年 14年 14年 14年 14年 14年 14年 14年 14年 14年 14	Berth.
Isophorone	10	751 × .	7.5-	40 . t. t	Large reproduce	eres e la como contrata esta	Gent track	Millionia (Parille a Ara)	. 7.13°-13°-12	entro de constante	
2-Nitrophenol	10		7.4 _{4.7} (2007)			P新数字等12			题		
2,4-Dimethylphenol	10	ng mga amang sayaga a	od s občest		san, arynad	investor and seem	a su ere	rich i what we d	restrict .	777	
bls(2-Chiloroethoxy)methane	10		ala (Pro- activisti		Server Server			重要几乎	是某人	讓水工。	i
2,4-Dichlorophenol	10	ttan e and e e e	ಕಾರ್ಚ್ನ	ger to any to	Billion and 1	adent colors	vester).	meanana a a la la la la la la la la la la la l		Without the state of	e i e is — i
Naphthalene	10	(表) (1 4 f) (4 f) (表) (4 f) (4 f	70 mg/				題之,		det Meg	Towns and	par.
4-Chloroaniline	10	34	ქალიეს ქალიეს	de din	يودي دريو پردي دريو	स्वतारुकः । अञ्चलक	e dha barr	968-250 - 1500 1	Egon _{ation} .	ENV Section	
Hexachlorobutadiene	10	Programme		Continue Maria	de la constitución Algundador Calabara		(4) (4) (4)	2000年2月1日 2000年2月1日 2000年2月1日	Line 1	1 3 to	i.
Caprolactam	10			Fe L	,#. ·		grand.			Carron de	,
4-Chloro-3-methylphenol	10			Part to the state of the state	1		(Filadi Tari	and a second se	. 1 		
2-Methylnaphthalene Hexachlorocyclopentadiene	10 10	seritings Services		grande en de Grande en de	2343. 134 A	es la lateration de	# 1	William Co.			
2,4,6-Trichlorophenol	10	(軍を主義)し	₩4.2°.		<u> </u>		F (***)	製造的にたが	197-	والمعاشدة والمعاشدة	* ** ·
2,4,5-Trichlorophenol	25		Sasar.	jaky en ar	547 1114		91. J. 184	perati. Li	5.3,50	gg , and kilon, t	à
1,1'-Biphenyl	10	45 L		ēri las	4.15			EFILE CO		-1	
2-Chloronaphthalene	10		inger Landar	Lake						545957	į. · /
2-Nitroaniline	25	क्षिक्षिक्त ज्ञाना । 	إنسارتك الما	J40	3534		1.1.F		横門	K. C	
Dimethylphthalate		egen eggegga koon. Ander Alle gjes	77:	32.5 33.5	i Ewiki	general Special Special Section 1	رفيد إفراك		Holograf	1381 M. 11.14	٠. ٠
		新 港開発。"。"	Y 1 Y .	Brank i e y	ते क्षतीत्व चुन	F. 7 7 14			Agista CBC 1	#1. 13. 1. p.	
the second secon	CONTRACTOR OF	建基字的Land	Sir da USA		San S	the section	Ng.27	MARKA M	55 55	Wis our to t	A.
		anger and a fin	don't	2. · · · · · · · · · · · · · · · · · · ·	and the	en apriliare me	i Tille e	[2007][10][11][27]	清楚	\$F~	
2,6-Dinitrotoluene Acenaphthylene 3-Nitroaniline	10 10 25		ar J Jacobs		7 # 82 2 # 8 2 # 8 }	dag fyrfig. Diamora o			朝 45 神政(*)		356

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Page _6__ of _10___

ORIGINAL IRECT

Case #: 28712

SDG: C03S1 -

Site : Lab. : ALBEMARLE DUMP #2

LAUCKS

Number of Soil Samples: 0 Number of Water Samples: 6

Sample Number :		C03S1		C03S2		C03S3		C03S4		C03S5	
Sampling Location :		STREAM01		STREAM02	2	STREAM03	3	680BROAD)	HIDBROAD)
Field QC:											
Matrix:		Water		Water		Water		Water		Water	
Units:		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		11/6/00		11/6/00		11/6/00		11/6/00		11/6/00	
Time Sampled :		12:00		13:45		14:00		16:30		17:00	
%Moisture:		N/A		N/A		NA		N/A		N/A	
pH:											
Dilution Factor :	Longi	1.0		1.0		1.0	-	1.0		1.0	Υ
Semivolatile Compound Acenaphthene	CRQL 10	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
2,4-Dinitrophenol	25				7		1	Maria da			
4-Nitrophenol	ومستسارة الأ	大。 第二章	ا د د ۱			-5 <u></u>	.:: . x' .::::::::::::::::::::::::::::::::::::	ter · · · ·	9/ 5 ₀	4 . 4 .	v · · .
Dibenzofuran	10	ani a sii 279 w	7/4:	Tyn i		ж <u>і</u> « 577)	43.00	90	19.	1 - 4	. Se
2,4-Dinitrototuene	10	e Batania		(2)) (2))	3.41.73. 0.14.73.		100 m	eliana di s	des.	tie.	
Diethylphthalate	10	8"	Time a	* ·	Ù		29				ii k
Fluorene	10		3 ⁵ 7. 114	9.00 mg/s	1 1	August 1. A			11.41.2-4 11.11.7	Tari dayar .	
4-Chlorophenyl-phenyl ether	10		±₹%.	वर्ग (१५५)			$\lim_{n\to\infty} \mathcal{F}_n g$	(新聞: 1974年)。 	(F		iria r
4-Nitroaniline	25		20.73 2	Egrando de Salado	9 3		efe Vari	i de la composición dela composición de la composición dela composición de la composición dela composición dela composición de la composición de la composición dela composición dela composición dela composición dela composición dela composición d	No.	1 1 11 14	Kari -
4,6-Dinitro-2-methylphenol	25	24	W	,	At i	"		សំមាន។ វ	fia		5-1011
N-Nitrosodiphenylamine	10			: /		·*-	n				20
4-Bromophenyl-phenylether	10					iri	1				:
*Hexachlorobenzene	10			7					١.		l d
Atrazine	10			v				34.			· -:
*Pentachlorophenol	25	Patricy - 1	÷.,		्र वृक्षकर्मा			Bar Bij et verti	(원보다		
Phenanthrene	10	promise and		Marie Carlo Carlo	Je	r villet i Hemilitæ	2.	all a to the); = • p.	A 5 4 7	
Anthracene	10				3 2-7		under Sold Part de	題が (Part)	entra de la companya	寒. : *	
Carbazole	10							A2 (4)	147	किंदा ११६	
Di-n-butylphthalate	10		fig.	-70a	110		X4		#2 10,		1
Fluoranthene	10					3.4.		de la Maria de	,41		
Pyrene	10	дг 4 ст.)	i s. T		3,7	e e	2/ 2/	PIN	ì	<u>.</u>	
Butylbenzylphthalate	10									·	
3,3'-Dichlorobenzidine	10						2 2 2	9g - 25	- 1.) 	
Benzo(a)anthracene	10									.,	
Chrysene	10	Wing To an and	G.	1			es ti na se Cas	\$1 m	1	14 d	1
bis(2-Ethylhexyl)phthalate	10					1	J				ľ
Di-n-octylphthalate	10	Marian de la companya	**		le r				Asia 200 2 Azia Azia		ľ
Benzo(b)fluoranthene	10	in earlier							. 1		l
Benzo(k)fluoranthene	10				¥:.		1.5 s			F	1
Benzo(a)pyrene	10		,					,			
Indeno(1,2,3-cd)pyrene	, 10.		3.0			parking to provide to the second	Y.17.			<u> </u>	
Dibenzo(a,h)anthracene	10										
Benzo(g.h.i)perylene	= 10	100.5		N					3.76		1.

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Page _7_ of _10__ OR/G/NAL

Case #: 28712 Site :

Lab.:

SDG: C03S1

ALBEMARLE DUMP #2

LAUCKS

Number of Soil Samples: 0 Number of Water Samples: 6

Sample Number :		C03S6				[-				
Sampling Location :		701BROAD)			İ					
Field QC:		•		İ							
Matrix:		Water									
Units:		ug/L .									
Date Sampled :		11/6/00									
Time Sampled :	•	17:30									
%Moisture:		NA									
pH:				ļ		•		١.			
Dilution Factor :		1.0									
Semivolatile Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Benzaldehyde	10	21 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	<i>></i> .								
Phenol	10		l .	_]		ľ			1
bis-(2-Chloroethyl) ether	10			Men di la comi	3		· · · · · ·	2 <u>1</u> 2	<u>;</u>		
2-Chlorophenol	10		-10	20 - 10 - 1 - 1 - 1							1
2-Methylphenol	, 10		20/4020 20/401 20/401		7.				and and the second of		visi A
2,2'-oxybis(1-Chloropropane)	10			San San San San San		.			1		
Acetophenone	10.5		12		347-347 Metric				Spirit at		
4-Methylphenol	10	Martin V e t	ε u ·		The same of	la Erita de la la la	ev s	ا من است	a	to a 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
N-Nitroso-di-n-propylamine	- 10	Eggland Filograph + The Alba Sarvar		विकास है। कुछ पान है। संदेश		namen en en en en Politica Paris.	章 第 3	n serie. Potentino de Maria	5 5		ģara au =
Hexachloroethane	10	. 10**	614 11	l		<u> </u>					İ
Nitrobenzene	10	de tal in a series			\$1.00 \$1.00		n of or or of or	ing a second	拉		1 44
Isophorone	10				١.				1		
2-Nitrophenol	10	en de la company	~							6	F -
2,4-Dimethylphenol	10								Ì.,		· .
bis(2-Chloroethoxy)methane	.10		्राष्ट्र को स्टू				<u>-</u>	77.	2K 1-K	3	-954
2,4-Dichlorophenol	10				T-15 - 11 .	Line at en al rosta i		nana kala s			l .
Naphthalene	10			新工工。 新工工	şke ç		国国 为			En en	41 1914
4-Chloroaniline	. 10	978 1 H 1 2 2 1 1	w . u.	grand of the state	er er er er	A 5 A 1	u stalici	ورامران الراجي والمناف	·		
Hexachlorobutadiene	10		55. E.			部为帕拉		The same of			
Caprolactam	10	Supplied a selection				Dina katawa mala k	CHRON N	imeru i ne ele	,		
4-Chloro-3-methylphenol	10	野菜。	12.5 =	數字 16/12年) 1965年	roy tr Fa√	And the second of the second o			(F) t	5 A	÷
2-Methylnaphthalene	10	an end .		,				uf≅ 1	ļ, .		
Hexachlorocyclopentadiene	10		S.,			-			ڻ آ		
2,4,6-Trichlorophenol	10		() -				2000	.			1
2,4,5-Trichlorophenol	25	¢*		K 197		14			** ***		l
1,1'-Biphenyl	10	esta in the	.	e16 [‡]		and the state of the same					
2-Chloronaphthalene	10		a.,;				-	di in			
2-Nitroaniline	25	teran e in				.	,	e Programme in the		· · · · · · · · · · · · · · · · · · ·	
Dimethylphthalate	10		442			P :		F .			1
2,6-Dinitrotoluene	10	totals in the			41			program		. :	
Acenaphthylene	10		AL SE				ê j	37) -	0 ₹ - 5		
3-Nitroaniline	25 ·	l ,		l '	Ī	l ·	l .	1	l	l	

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

Page _8__ of _10____

ORIGINAL IRECIJ

Case #: 28712

SDG: C03S1

ALBEMARLE DUMP #2

Number of Soil Samples: 0 Number of Water Samples: 6

Site : Lab. :

LAUCKS

Sample Number :		C03S6		<u> </u>	1	'					
Sampling Location :		701BROAD	,								
Field QC:											•
Matrix:		Water	:								
Units :		ug/L									
Date Sampled :		11/6/00		ļ.							
Time Sampled :		17:30		,							
%Moisture:	,	N/A				٠.					
pH:							- 1				
Dilution Factor:		1.0		ļ.,				•		•	
Semivolatile Compound	CROL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
Acenaphthene:	<u> </u>	Harry Control		·		,		3. (A. 11) A. 12	20.	1. 50%	
2,4-Dinitrophenol	25	ļ					,				
4-Nitrophenol	25	5 - 0 00 to	ev (01	er Verster	
Dibenzofuran	10										
2,4-Dinitrotoluene	10	gradien in S		Z 1			数特点				s s d
Diethylphthalate	10						l			·	.
Fluorene	- 10	Service .		 دور	3.1		新たさい である。		i di Alvero		
4-Chlorophenyl-phenyl ether	10		İ								1
4-Nitroaniline	25		il si		(9) (1) -1 (1) (1) (1) (1) (1) (1)						
4,6-Dinitro-2-methylphenol	25					1		,			
N-Nitrosodiphenytamine	10 =	g .	7 n.)	1.5 ±: 1. ±:		274-3 274-3		,		14.1 2.42££
4-Bromophenyl-phenylether	10		l			l	1				1
*Hexachlorobenzene	10	∜ . ;	Ş		on a grait		1-7-3-6	g.		<u>e</u>	
Atrazine	10		l								
*Pentachlorophenol	25 ≅	数	(N = 3	and the second s	Stepen of		à	विक्री के स्थाप्त के प्राप्त होते हैं	ije je Ser	ir Til	' '
Phenanthrene	10					l,					
Anthracene	10		近1 7	熟了。	78 F					F3577	
Carbazole	10	,	e*. »	ļ						P	
Di-n-butylphthalate	ં 10 ે	7	्र ^{ह्} ं है। १८५०	Egypton of Makes St. English on Ar	1.14 Ty	產品的問		Straight Charles and the Straight Charles and	in the	献*	
Fluoranthene	10				2/4	a v Tal	ļ			ļ.	
Pyrene	~ 10 ·				35.5	āβ, EV.	āu, S.				
Butylbenzylphthalate	10					, ,	_			k	l.
3,3'-Dichlorobenzidine	10				.E4 1		\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.\.	Part English	ar.	. · · ·	,
Benzo(a)anthracene	10	ezati ji e			1	,			İ		•
Chrysene	10.		· ·	, '			1	f • ·		8'	1
bis(2-Ethylhexyl)phthalate	10	197 Sept.									
Di-n-octylphthalate	10							4	1		
Benzo(b)fluoranthene	10	A21 9-1			- wg .		1	-	.,	i <u></u>	l
Delizo(K)IIBOI ZIIII IGIO	10	1964. 1985.	1. ,	i	- 21		***		A	1	
Benzo(a)pyrene	10	ē.					.4.	las e e e		l .	l
Indeno(1,2,3-cd)pyrene	10.s				"		1	to en en en en en en en en en en en en en]		· .
Dibenzo(a,h)anthracene	10	45 B		ļ			ļ	1. n		.s_ + . + . +	
Benzo(g,h,i)perylene	10		.,*.		<u> </u>		1			Ī	

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

DATA SUMMARY FORM: PESTICIDES AND PCBS

Page _9__ of _10___

ORIGINAL REDJ

Case #: 28712

SDG : C03S1 -

ALBEMARLE DUMP #2

Number of Soil Samples: 0

Site : Lab. :

LAUCKS

Number of Water Samples: 6

Sample Number :		C03S1 .		C03S2		C03S3		C03S4		C03S5	
Sampling Location :		STREAM01	ı j	STREAM02	2	STREAM03		680BROAD		HIDBROAD	
Field QC:	İ	l				i i					
Matrix:	;	Water		Water		Water		Water		Water	
Units:		ug/L		ug/L		ug/L		ug/L		ug/L	
Date Sampled :		11/6/00		11/6/00		11/6/00		11/6/00		11/6/00	
Time Sampled:		12:00		13:45		14:00	3	16:30		17:00	
%Moisture:		N/A		N/A		N/A		N/Á		N/A	
pH:											
Dilution Factor:		1.0		. 1.0		1.0		1.0		1.0	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050				%,		4:1			(B.)	
beta-BHC	0.050				1	١.		-	1		
delta-BHC	0.050	els :	2.5		. <u></u> T			· ·	si .		•
*gamma-BHC (Lindane)	0.050	ļ									
*Heptachlor	0.050		la en	į.		Harris Harris	4			diget in the second	L What
Aldrin	0.050				ļ.,			1			
Heptachlor epoxide	0.050	100 mg			壁上,			47		Special control of the last of	
Endosulfan I	0.050										
Dieldrin	0.10				7		72	\$4. ku) 194	i.	in district	
4,4'-DDE	0.10	,	a - 1 -		_						
*Endrin	0.10	1 -1	2000 1200 1		7 4.20	g or or a line by Fil	1	ا المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المرابع المراب	April 1 Terre 1		3 fe
Endosulfan II	0.10	ł	1				1				
4,4'-DDD	0.10					1 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7			and a		
Endosulfan sulfate	0.10						l			,	
4.4'-DDT	0.10	43,				à.			ř	F	
*Methoxychlor	0.50	.	١.	l		en et in en					
Endrin ketone	0.10	7.4-1	3. 11. S			2		-	(\$4.7 [1]	\$************************************	
Endrin aldehyde	0.10	, .		2.2	1	. .	ŀ		-		
alpha-Chiordane	0.050))	30				 		
gamma-Chlordane	0.050	l			1		;÷ ·				
*Toxaphene	5.0						jan e t	in the	14.4 10	2	
*Aroclor-1016	1.0					l.,			l .	<u></u>	1
*Aroclor-1221	- 2.0	Fire 12 is			19.2		100 m		ight Vi	er Program November 18 er gran	
*Aroclor-1232	1.0			_	I	<u> </u>	1				
*Aroclor-1242	1.0										'
*Aroclor-1248	1.0				1		İ				1
*Aroclor-1254	1.0						l	• •	1		
*Aroclor-1260	1.0			l	1	ł		i .	1	1	1

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

DATA SUMMARY FORM: PESTICIDES AND PCBS

Page _10__ of __10__

Case #: 28712

SDG : C03S1

ALBEMARLE DUMP #2

Number of Soil Samples: 0

Site: Lab.:

LAUCKS

Number of Water Samples: 6

Sample Number :		C03S6				r					
Sampling Location :		701BROAD	1			ļ					
Field QC:						1			1		
Matrix:		Water							'		
Units:		ua/L									
Date Sampled :		11/6/00									
Time Sampled :		17:30									
%Moisture:		N/A									
pH:										J	
Dilution Factor:		1.0								1 .	
Pesticide/PCB Compound	CRQL	Result	Flag	Result	Flag.	Result	Flag	Result	Flag	Result	Flag
alpha-BHC	0.050	ومعاولة والمراجعة	. Tab.	9 1 4 - 1 - 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	$\mathbb{P}_{k_{0}}$	British S.				Th	
beta-BHC	0.050								l. '		
delta-BHC	0.050	A STATE OF THE STA	STE of			%; gu ''			i Jinin .		
*gamma-BHC (Lindane)	0.050	<u> </u>			1	i I					
*Heptachlor	0.050	爱。""例	$\mathbb{R}^{d}\mathbb{C}_{\mathbb{R}}$		inkoj. Nastani		20 L		San er San	t jagar an	e di serie. Na serie
Aldrin	0.050		<u> </u>		l . ,						
Heptachlor epoxide	0.050			Miller of	問的						ing i General S
Endosulfan i	0.050	Market State of the	source services	arane aan			et autoriania				
Dieldrin	0.10		発送等		<u> </u>				Ē.		er eg
4,4'-DDE	0.10	560 AAN 3		'a u		design of the control of	lufu al	and the second		1	
Endring	0.10		實力		4.00	展识别。					\$ 5 .
Endosulfan II	0.10	స్మంగ్స్ ఈ	775.C.36	Rock of the	,	P2 a a come π	r Mara – t	an the steel to	n ' a	e satisti	
4.4-DDD	0.10	Education ?		Šφ(). 1	ું કે ે						F
Endosulfan sulfate	0.10	Santoniae, es			engus se	t	1300	,			
4.4-DDT	0.10				7		jeli k jeli: A		: <u>;</u>		
*Méthoxychlor	0.50	Bass. 7 William	المر 11 وي	gen ger	touc. r	des and the	ing access	es year age	سنير		
Endrin ketone	0.10		扩张							Service .	ļ · · · ·
Endrin aldehyde	0.10	egates in the		e Angles (m. 1	y J.301	gnarkey.	%.s.a*%.	ed all the			
alpha-Chlordane	0.050		This ?	Property of the second	meres meres			विकास विकास			
gamma-Chlordane	0.050	ing and state in the second And the second second			_ Y -97*	nggar Garagasi	19. s	sā kri in si			. :
*Toxaphane *Arocior-1016	5.0	होद्देश र कर्ते हता	: .		\$15. P	Mark a self-t	(%). 2:€	변화 1 년, 1	atjern		
	1.0 2.0			groups of the extension	Fo A	£31,50		i (j _{ar} Paakπta	عين .	rije da ji ji	1
*Arocior-1221: *Arocior-1232	l' "	<u>. 1945, kata, yadaya</u>	الله فيال الما فيال	######################################	i i S		åd	構造性 Adit.	-	e. 16. e	e 1,5%-20
*Arodor-1232	1.0 1.0	Maria sa sa sa sa sa sa sa sa sa sa sa sa sa	(2 = 3*2) 3 (1)	and and a			野 水	التراكيس		19	
*Arodor-1248	1.0		¥11.7			126		ja i	\$		
Aroclor-1254	1.0 1.0	स्तिति । अस्ति । विकास	en Norde	The Talk Fig.	geric	y and Digger,		graph of graph frag		;	٠.
*Arodor-1254		<u>स</u> ्थाप व	[A-49	BA, A	A They are		. ".	Broken (1925) Professional	ľ.	7 7 6 FC	
ATOCIOT- 1200	1.0		<u>. </u>			L .	Ĺ				l .

CRQL = Contract Required Quantitation Limit

*Action Level Exists

SEE NARRATIVE FOR CODE DEFINITIONS

To calculate sample quantitation limits multiply the CRQL by the Dilution Factor

ORIGINAL IRECT

Appendix C

Tentatively Identified Compounds

EPA SAMPLE, NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

C03S1

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code:

LAUCKS

SAS No.:

SDG No : C03S1

Matrix: (soil/water)

WATER

Lab Sample ID:

. <u>0011170-01</u>

Sample wt/vol: 5

(g/mL)

Lab File ID:

S1109008.D

Case No.: 28712

Level: (low/med)

Date Received:

11/08/00

% Moisture: not dec.

LOW

Date Analyzed:

11/09/00

GC Column: <u>RTX-624</u> ID: <u>0.25</u> (mm)

Dilution Factor:

Soil Extract Volume:

· (μL)

Soil Aliquot Volume: (µL)

Number TICs found:

CONCENTRATION UNITS:

(µg/L or µg/Kg)

. COMPOUND NAME EST.CONC. · Q CAS NUMBER

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

C03S2

Lab Name:

LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code:

LAUCKS

Case No : 28712

SAS No :

SDG No.: C03S1

Matrix: (soil/water)

WATER

Lab Sample ID:

0011170-02

Sample wt/vol: 5

(g/mL)

Lab File ID:

U1116015.D

Level: (low/med) LOW

ML

Date Received:

11/08/00

% Moisture: not dec.

11/16/00

GC Column: DB-624

ID: 0.45 (mm)

Dilution Factor: 1.0

Soil Extract Volume:

(μLi)

Soil Aliquot Volume:

Date Analyzed:

(μL) .

Number TICs found: 0

CONCENTRATION UNITS:

 $(\mu g/L \text{ or } \mu g/Kg)$

UG/L

COMPOUND NAME RT EST CONC. O CAS NUMBER

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

C03S3

Lab Name:

LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code: LAUCKS

Case No.: 28712 SAS No.: SDG No.: <u>C03S1</u>

Matrix: (soil/water)

WATER

Lab Sample ID:

0011170-03

Sample wt/vol: 5

(g/mL)

Lab File ID: <u>U1116016.D</u>

Level: (low/med) LOW

Date Received: 11/08/00

% Moisture: not dec.

Date Analyzed:

11/16/00

GC Column: $\underline{DB-624}$ ID: $\underline{0.45}$ (mm)

Dilution Factor:

Soil Extract Volume:

(µL)

Soil Aliquot Volume: (µL)

Number TICs found:

CONCENTRATION UNITS:

(μg/L or μg/Kg) UG/L

1.0

RT COMPOUND NAME EST.CONC. CAS NUMBER .

1F

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

C03S4

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code:

LAUCKS

Case No.: 28712

SAS No.:

SDG No.: C03S1

Matrix: (soil/water)

WATER

Lab Sample ID:

0011170-04

Sample wt/vol: 5

(g/mL) ΜĹ Lab File ID:

U1116017.D

Level: (low/med) LOW

11/08/00

% Moisture: not dec.

Date Analyzed:

11/16/00

GC Column: DB-624

ID: 0.45 (mm)

Dilution Factor:

Date Received:

1.0

Soil Extract Volume:

(µL)

Soil Aliquot Volume:

(μL)

Number TICs found: 0

CONCENTRATION UNITS:

(μg/L or μg/Kg)

UG/L

<u> </u>				
CAS NUMBER	COMPOUND NAME	i RT	EST.CONC.	
CAD NOVIDER	COLIT COLID TELLIZ	I KI	201.00	
		1.		
				

1 F

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

C03S5

Lab Name:

LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code: LAUCKS

Case No.: 28712 SAS No.:

SDG No :

C03S1

EPA SAMPLE NO.

WATER

Lab Sample ID:

Matrix: (soil/water)

0011170-05

Sample wt/vol: 5

(g/mL)

Lab File ID:

U1116018.D

Level: (low/med) LOW

to the controlled their reasons the side hours with the substitutions

Date Analyzed:

Date Received: 11/08/00

% Moisture: not dec.

11/16/00

GC Column: DB-624

ID: <u>0.45</u> (mm)

Dilution Factor: 1.0

(µL)

Soil Extract Volume: (µL)

CONCENTRATION UNITS:

Soil Aliquot Volume:

Number TICs found:

(μg/L or μg/Kg) UG/L

COMPOUND NAME CAS NUMBER

RТ

EST. CONC.

Q.

1F

VOLATILE ORGANICS ANALYSIS DATA SHEET TENTATIVELY IDENTIFIED COMPOUNDS

EPA SAMPLE NO. C03S6

LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code:

Case No.: 28712

SDG No.:

C03S1

LAUCKS

SAS No.:

Lab Sample ID:

0011170-06

Sample wt/vol: 5

LOW

WATER

Lab File ID:

U1116019.D

Level: (low/med)

(g/mL) ML

Date Received:

11/08/00

% Moisture: not dec.

Matrix: (soil/water)

Date Analyzed:

11/16/00

GC Column: DB-624

ID: 0.45 (mm)

Dilution Factor:

1.0

Soil Extract Volume:

 (μL)

Soil Aliquot Volume:

(μ**L**)

Number TICs found:

CONCENTRATION UNITS:

 $(\mu g/L \text{ or } \mu g/Kg)$

CAS NUMBER COMPOUND NAME RT .

EST.CONC.

Q

EPA SAMPLE NO.

VOLATILE ORGANICS ANALYSIS DATA SHEET

TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

C03S7

Lab Code:

TRIP BLANK

LAUCKS

Case No.: 28712

SAS No.:

SDG No.: C03S1

Matrix: (soil/water)

WATER

(g/mL)

Lab Sample ID:

0011170-07

Sample wt/vol: 5

Lab File ID:

U1116020.D

Level: (low/med)

LOW

Date Received:

11/08/00

% Moisture: not dec.

Date Analyzed:

11/16/00 1.0

GC Column: DB-624

ID: 0.45 (mm)

Dilution Factor:

Soil Extract Volume:

 (μL)

Soil Aliquot Volume: (μL)

Number TICs found: 1

CONCENTRATION UNITS: (μg/L or μg/Kg)

UG/L

CAS NUMBER	COMPOUND NAME	RT	EST.CONC.	Q
1.	unknown	9.19	5	J

SAS No.:

EPA SAMPLE NO. C03S1 -

SDG No : <u>C03S1</u>

Lab Name: <u>LAUCKS TESTING LABORATORIES</u>

Contract: 68-W-00-075 Case No.: 28712

Lab Code: LAUCKS

Matrix: (soil/water) WATER Lab Sample ID: 0011170-01

Sample wt/vol: 1000 (g/mL) ML Lab File ID: <u>D1114012.D</u>

Level: (low/med) LOW Date Received: 11/08/00

% Moisture: Decanted: (Y/N) Date Extracted: 11/13/00

Concentrated Extract Volume: 1000 (µL) Date Analyzed: 11/14/00

Injection Volume: $\underline{2}$ (μL) Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH: Extraction: (Type) CONT

Number TICs found: CONCENTRATION UNITS:

 $(\mu g/L \text{ or } \mu g/Kg) \underline{UG/L}$

CAS NUMBER . COMPOUND NAME EST. CONC.

EPA SAMPLE NO.

C03S2

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

SAS No.:

Lab Code: LAUCKS Case No : 28712

SDG No .: C03S1

Matrix: (soil/water) WATER

Lab Sample ID: 0011170-02

Sample wt/vol: 1000 (g/mL) ML

Lab File ID: D1114013.D

Level: (low/med) LOW

Date Received: 11/08/00

% Moisture: Decanted: (Y/N)

Date Extracted: 11/13/00

Date Analyzed: 11/14/00

Injection Volume: 2 (µL)

Concentrated Extract Volume: 1000 (µL)

COMPOUND NAME

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

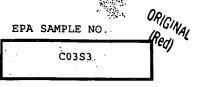
Number TICs found: 0

CAS NUMBER

CONCENTRATION UNITS: (µg/L or µg/Kg) UG/L

EST.CONC.

OLM04.2 216



Lab Name: <u>LAUCKS TESTING LABORATORIES</u>

Contract: 68-W-00-075

Lab Code: LAUCKS

Case No.: 28712

SAS No.:

SDG No.: C03S1

Matrix: (soil/water) WATER

Lab Sample ID: 0011170-03

1000 (μL)

Lab File ID: D1114014.D

Sample wt/vol:

1000

(g/mL). ML

Date Received: 11/08/00

Level: (low/med) LOW

Decanted: (Y/N)

% Moisture: Concentrated Extract Volume:

Date Extracted: 11/13/00

Date Analyzed: 11/14/00

Injection Volume:

(μ**L**)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Number TICs found:

Extraction: (Type) CONT

CONCENTRATION UNITS: $(\mu g/L \text{ or } \mu g/Kg) \text{ } \underline{UG/L}$

CAS NUMBER	COMPOUND NAME	RT	EST. CONC.	Q
1. 1460-57-7	1,2-Cyclohexanediol, trans-	7.39	3	JN

EPA SAMPLE NO ORIGINAL C03S4

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code: LAUCKS

Case No.: <u>28712</u>

SAS No.:

SDG No.: C03S1

Matrix: (soil/water) WATER

Lab Sample ID: 0011170-04

Sample wt/vol: 1000

(g/mL) <u>ML</u>

Lab File ID: D1114015.D

Level: (low/med) LOW

Date Received: 11/08/00

% Moisture: Decanted: (Y/N)

Concentrated Extract Volume: $\underline{1000}$ (μL)

Date Extracted: 11/13/00

Date Analyzed: 11/14/00

Injection Volume: $\underline{2}$ (μL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Extraction: (Type) CONT

Number TICs found:

CONCENTRATION UNITS:

(μ g/L or μ g/Kg) \underline{U} G/L

	CAS NUMBER		* =		·	
	CAS NUMBER	COMPOUND NAME				
1	<u></u>	COLLEGE TOTAL	RT	ŀ	EST. CONC.	
		·		- 1		Ų

ORIGINAL EPA SAMPLE NO. (Red)

C03S5

Lab Name: LAUCKS TESTING LABORATORIES

Contract: 68-W-00-075

Lab Code: LAUCKS

Case No.: 28712

(g/mL) ML

SAS No.:

SDG No.: <u>C03S1</u>

Matrix: (soil/water) WATER

Lab Sample ID: 0011170-05

Sample wt/vol:

1000

Lab File ID: D1114016.D

Level: (low/med) LOW

Date Received: 11/08/00

% Moisture:

Decanted: (Y/N)

Date Extracted: 11/13/00

Concentrated Extract Volume:

1000 (μL) Date Analyzed: 11/14/00

Injection Volume:

2

 (μL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N

pH:

Extraction: (Type) CONT

Number TICs found:

CONCENTRATION UNITS:

 $(\mu g/L \text{ or } \mu g/Kg) \text{ } \underline{UG/L}$

CAS NUMBER COMPOUND NAME EST.CONC.

EPA SAMPLE NO.

C03S6

Lab Name: LAUCKS TESTING LABORATORIES

Sample wt/vol: 1000 (g/mL) ML

Contract: 68-W-00-075

Lab Code: LAUCKS Case No.: 28712

SAS No.:

SDG No.: C03S1

Matrix: (soil/water) WATER

Lab Sample ID: 0011170-06

Lab File ID: <u>D1114017.D</u>

Level: (low/med) LOW

Date Received: 11/08/00

% Moisture: Decanted: (Y/N)

Date Extracted: 11/13/00

Concentrated Extract Volume: 1000 (μ L)

Date Analyzed: 11/14/00

Injection Volume: $\underline{2}$ (μL)

Dilution Factor: 1.0

GPC Cleanup: (Y/N) N pH:

Extraction: (Type) CONT

Number TICs found:

CONCENTRATION UNITS:

 $(\mu g/L \text{ or } \mu g/Kg) \text{ } \underline{UG/L}$

EST. CONC. COMPOUND NAME CAS NUMBER

Appendix D

Chain of Custody Records

SEI	PΑ	United St	ates Environi Contract Lab	nental Protection oratory Program	on Agency	& Chai	in of Cus Organic C	ffic Report tody Reco LP Analysis)		SDG No. 1617 111	2	87	1/2
				3. Regi		oling Co. RAI n revised sco		5. Date Shippe		ex 7 4131	7: Date Receive	ract No.	Init Price
				"non res	Signature ponsive bas	sed on revis	ed scope:	6. Ship To:	hemiterh	Taratting b	8. Transfer to:		Date Received
!			ing Sey 15 a	4. Purp	se La		ng-Term tion	Scattle WA	US Camea	1/2 a or		·	-
			in Erwitzpieler Amerikansk Amerikansk		1 ノニ	REM Ri Si ESI	RIFS RD RA OBM	ATTN:	dison, Alt	- 68837	Contract Numbe	<u>_</u> _ f	Price
CLP Sample Numbers (from labels)	A Matrix (from Box 1) Other:	Conc. Sar Ty Low Co	C D mple Preservative (from Box 2) rab	TA (circle one) PR* 7 14 21 (E tAS Analysis TA (ctrute one) PR* 7 14 21 (TA (circle one)	Trackir	F al Specific g Number Numbers	G Station Location Identifier	Mo/Day/ Year/Time Sample Collection	Corresponding CLP Inorganic Sample No.	Sampler Initials	K Sample Condition
C 0351	1		(a) 1	prer			3036716	17,20,21,2391-	\$5 Treamill	11/6/00 1200	MCOLZU	16	<u> </u>
CU34, Z	1	 	1.0	98		MIX.		24-7-29	Stream US.	11/6/00 1745		10	<u> </u>
(0153	1		r.b 1	\$15 (35)		1	130367	1 7 7 7 7 -	Stream 03	11/6/00 1400	MICUIZI	1.6	ļ.
CU 354	1	 	1.1	A THE PERSON	****·		1 *	41-43	680 Rosed	11/6/00 1630	M(U) 27	64	<u> </u>
10355	1	 	10)		The state of	-		346-46	Hid Broad	11/400 1700	M(U1.24	(1	ļ
60356	1	+	140 1	868 post 4			30362	196-98	701 81001	11/6/04 1730	MIULZ5	60	<u> </u>
CU357	4	+	.41	277			3076	190-91	Nr. POlk	3/4/65 173 p	<u> </u>	ļ	
	 			Just	12/4/	S 8/8	-	351	•			↓	
	 	 		1		<u> </u>	-				<u> </u>		
	-	 		1					•			<u> </u>	<u></u>
Shipment for C Complete? (Y/	ase N1	Page 2 of	3 BNA MS/	ASD Required? ASD Required? MS/MSD Required	Y/N Sam Y/N Sam	ple #:			Additional Sampler Sig	natures	Chain of Custody Sea	l Number(s) .
PR provides 7-	day data	tumaround	in addition to	preliminary res			Chain o	f Custody	Record		-		
or preliminary r Relinquished b	esults wil	i increase a	nalytical cost	3.	Received by	<u> </u>			ed:by: (Signature)	Date / Tir	Received by:	(Signature) :
Relinquished b	y: (Signa	nture)	D	ate / Time	Received by	y: (Signature)	Relinquish	ed by: (Signature)	Date / Tim	e Received by:	(Signature)
Relinquished b	y: (Signe	ature)	D	ate / Time	Received fo (Signature)	r Laborator	DV.		Time Remark	s: Is custody seal intact	-	A adalli a a a 1	Standard Instruction
histribution: Blue	Region Cop	py for Return to S	Pink - SM	O Copy ab Copy for Return	to Region		/	-	~ (0.00)		**See Reverse for	r Purpose	Code Definitions

EPA Form 9110-2 (2/99)

- 64

\$EP	Unite	d States Cont	Environn ract Labo	nental Protect oratory Progra	tion Agency Im	& Cha	in of Cus	fic Report tody Recount of the Analysis)	ord colli	FO C#351	(351)		671	
	No.				jion No. Sam ar (Name)		7	5. Date Shipp	10 100		M-104	7. Date Received 108 - いっこ Laboratory Contr	act No.	IV 6/00 VV
		11		Sam	r Signalare on responsive	based on revis	vised scope: sed scope:	6. Ship To:	Chem Frech	7 414.		8. Transfer to:	075	Date Received
			Đ.	4. Pur Lead	se E	IA L	ong-Term		Rariton	tenter	ļ	Received by:		
	7 (B 1 (B				PRP ST FED 82	REM RI SI ESI	RIFS RD RA O&M	LAVERS Trating a	Edison Norma	5 5 5 9 9 1		Contract Number	r F	Price
CLP A Sample Mat Numbers (fro (from labels) Box Other	rix Conc.: m 1)	C Sample Type: Comp./ Grab	vative	TA (circle one) PR* 7 14 21 VOA	E RAS Analysis TA (circle one) PR* 7 14 21	TA (circle one) PR* 7 14 21 Pest/	Trackin or Tag	F al Specific g Number Numbers	Station- Location Identifier	H Mo/Day/ Year/Time Sample Collection	.0	orresponding CLP Inorganic Sample No.	Sampler Initials	K Sample Condition
C 0 35 2	1 1, 2	Link	5		1	#\$***	3034	325-6	57110002	11/6/00 13 45	M	(02 = 1	(i	
(0353	11.0	l <i>i</i>	5		9	(m)	3036	331-2	Stream U3	11/6/00 1400		(1127	(;	
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						-				:	. ,			
Shipment for Case Complete? (Y/M)	Pag	3	NA MS/M	SD Required? SD Required? AS/MSD Require	Y/N San Y/N San	nple#:			Additional Sampler Si	gnatures	Chair	of Custody Seal	Number(s	i)
*PR provides 7-day d	ata turnarou	und in ad	dition to r	oreliminary res			Chain of	Custody	Record	6	•			
for preliminary results Relinquished by: (Si	gnature)			te / Time	Received b	y: (Signatun			hed by: (Signature) .	Date / T	me	Received by: (Signature)	
Relinquished by: (S	1111		Da	ite / Time	Received b	y: (Signetun	9)	Relinquis	hed by: (Signature)	Date / T	ime	Received by: (Signature)	
Relinquished by: (S	ignature)		Da	ite / Time	Received to (Signature)	or Laboratory			/ Time Remark	ks: Is custody seal inta				36.8
Distribution: Blue Region White Lab (Copy Copy for Return	to SMO	Pink - SMO Yellow - Lai	Copy to Copy for Return	to Region		7		rm 9110-2 (2/99)		\$	ee Reverse for A *See Reverse for	dditional S Purpose	Slandard Inations Code Definitions EASS-99

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~E	PA	Onite	· Con	tract Lab	oratory Program	m M	& Cha (Fo	in of Cus r Organic Cl	tody Reco "P Analysis)	ora Otto	C#34			<u> </u>
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			145.		non	responsive t	based on revi	sea scope:	· //	46317	77 1 1703			
	iii.			No.	Samolo	r Signature responsive ba	ased on revise	ed scope:	Ship To: 🚣	hatoch (154/1/19600	8. Transfer to:	Da	te Received
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dig la de de de de de Glassica de de de de	alia. V.				4. Purp	ose" E		ong Term		140 5	Harney St.	Received by.		
			7) 54 ag	is kipeda Syldinina		SF PRP	REM E	RIFS -		seattle,	Washington 98	106 Contract Number	er Pri	ce
garage (100		FED BZ		RA O&M	ATTN:	:·	₩	86.		
CLP	Α	В	Ċ	D		E		T	F al Specific	G Station	H Mo/Day/	Corresponding	J Sampler	K Sample
Sample Numbers	Matrix (from	Conc.:	Sample	Preser- vative	TA	RAS Analysis	TA TA	Trackin	g Number	Location	Year/Time Sample	CLP Inorganic Sample No.	Initials	Condition
(from labels)	Box 1)			(from	(circle one)	(circle one)	(circle one) PR* 7 14 21	orlag	Numbers	Identifier	Collection	, Sample No.		
	Other:	Low	Grab	Box 2) Other:	VOA	BNA -	Pest/ PCB				1		1, 1	
CU3.51	1	100	biat	5					18, 19,22			MCO1 ZU	(0	
(0354	1.2	1000	biel	5		CENT	NAME OF THE OWNER OWNER OF THE OWNER	30363		6809.000	11/6/00 1670	M(U2 Z 3	145	
(0355	2	100		5		1	100 M	30363		H, I Broad	11/6/00 1700	M(U) 24	(0	
•						1	13/4	10000	≫ (v:	\$ 51		1		
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U.S. EPA Region III Sample Scheduling Request Form

RAS CASE No: (T693 28712	D	AS No:		NSF No:	ORIGINA			
Date:	Data Validat	on Level: I	412		EPA Lab Reply: (Red)				
Site Name: Alben	narle Dump #2								
Address: Broad	Axe Road			City: Charle	ottesville	State: VA			
Latitude: Unk	•	Longit	ude: Unk		Anal +Val l	Data TAT:42 days			
Program: Superf	und	CERC	LIS No: Requested	(new Site)	Activity: Re	emoval			
Account No: Req	uested (new Site)	Ор	erable Unit:		Spill ID:				
Preparer: Chris	Wagner, OSC	RPM/	PO:Chris Wapner,	osc	Site Leader	: RAI- START Contractor			
Phone: 215-814-3	3261	Phone	: 215-814-3261		Phone: 804	-279-0222			
FAX: 215-814-32	54)	FAX:	215-814-3254		FAX: 804-2	279-0227			
E-mail: wagner.c	hristine@epa.gov	E-mai	:	. 20 -	E-mail: No	t available			
EPA CO: Debbie	Eble	Contra	act Type: START	Prime: RAI		Sub: N/A			
Lab Assignment	Date:		Analytical TAT	: 21 dáys	Ship Date I	From: 11/67			
Organic Lab:					Ship Date 7	ro: 1/07			
Inorganic Lab:		MIT	KEM		Carrier: Fe	edEx			
SAMPLES	METHOD			PARAMETEI	R	MATRIX			
8	OLM04.2	TCI	Organics: VOAs,	SVOA, Pesticides	√PCBs	AQ			
8	ILM04.1	TAI	L Metals			AQ			
- 14			· · · · · · · · · · · · · · · · · · ·						

NOTE: Data validation levels M3 & IM2 require justification. QC field samples must be included as part of total number of samples.

^{1.} Special Instructions:

^{2.} Objectives / Project Plan ID / Permit ID:

^{3.} Program / Project / Permit Reporting Limits

^{4.} DQO (QC Requirements)

Appendix E

Laboratory Case Narratives

940 S. Harney Seattle, WA 98108 ORIGINAL (Red)

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17.24

SDG Narrative

To: United States Environmental Protection Agency

Laboratory Name: Laucks Testing Labs

Case No.: 28712

Laboratory No.: 0011170

SDG No.: C03S1

Contract No: 68-W-00-075

Date of Report: November 30, 2000

SAMPLE RECEIPT, IDENTIFICATION, AND GENERAL COMMENTS:

Sample Receipt and Identification:

The samples submitted under the laboratory number(s) indicated above were identified and analyzed as tabulated below. The samples were collected and received on the dates noted on the enclosed chain-of-custody copies, Attachment A.

Client Sample Identification	Laucks Sample Identification	Testing Analytical Request
<u>identification</u>	<u>identinoation</u>	- Itoquoo e
C03S1	0011170-01	VOA/ABN/PEST
C03S2	0011170-02	VOA/ABN/PEST
C03S3	0011170-03	VOA/ABN/PEST
C03S4	0011170-04	VOA/ABN/PEST
C03S5	0011170-05	VOA/ABN/PEST
C03S6	0011170-06	VOA/ABN/PEST
C03S7	0011170-07	VOA

Analytical Request Key:

VOA =	Volatile Organics (OLM04.2)
ABN =	Semi-Volatile Organics (OLM04.2)
PEST = '	Pesticides/PCBs (OLM04.2)

Sample Receipt Comments:

Sample C03S4 had 1 of 2-gallon jugs broken in transit. Sufficient sample volume was available for analyses. No QC sample was identified on the traffic report for QC. However, sample C03S1 had sufficient sample volume for QC. DynCorp was contacted and Laucks was directed to use C03S1 as the QC sample on 11/13/00. Holding times based on VSTR expired on 11/13/00, therefore the MS and MSD could not be performed for this SDG for the SVOA and Pesticide extractions within holding time. Laucks was requested to identify this in the narrative.

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940 S. Harney Seattle, WA 98108



GENERAL REMARKS ON ORGANIC ANALYSES:

The following comments describe general analysis conditions. For remarks specific to the samples reported in this case, see "SPECIFIC REMARKS ON ORGANIC ANALYSIS."

Manual Integrations:

One or more analytes may have been manually integrated on the data system quantita on reports. All manual integrations have been flagged, initialed and dated by the analyst. A list of the manual integration flags is detailed below.

M	Manual integration due to irregular peak shape
MS	Manual integration due to split peak
MR.	Manual integration due to retention time shift
MI	Manual integration of correct isomer or peak
MT	Manual integration due to peak tailing
MB	Manual integration due to irregular baseline

All GC/MS Fractions:

The computerized printout for sample analysis may tabulate values for target analytes that are not reported on the relevant Form I. In that case, we have manually searched the mass spectral data and have eliminated the compound(s) as reportable based on this search.

Volatile Fraction:

The instrument was fitted with the following column and trap:

Manufacturer	Column Name	Length ·	ID, mm	Film thickness, μm	Packing material
J&W	DB-624	75 m	0.45	2.55	6% Cyanopropylphenyl 94% dimethylpolysiloxane
Trap VOCARB 3000/K Trap	-	nufacturer upelco	Packing 10 cm Carbopack B 6 cm Carboxen 1000 1 cm Carboxen 1001		•

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Semi-Volatile Fraction:

The GC was fitted with the following column:

Manufacturer	Column	Length	ID, mm	Film thickness,	Packing material
Restek	Name RTX-5Sil MS	30 m	0,25	μ m 0.25	cross bond 5% diphenyl/95% dimethylpolysiloxane

Pesticide/PCB Fraction:

The GC was fitted with the following columns:

Manufacturer	Column Name	Length	ID, mm	Film thickness, µm	Packing material
J&W	DB-5	30 m	0.45	1.27	5% Phenyl- methylpolysiloxane
J&W	DB-608	30 m	0.45	0.7	5% Phenyl- methylpolysiloxane

SPECIFIC REMARKS ON ORGANIC ANALYSES:

Holding Time Compliance:

Following the Contract Laboratory Program (CLP) model, Laucks calculates holding time compliance for organic determinations based on the first injection and/or analysis of an extract or sample. Subsequent analyses (for instance, for the purpose of dilution) are not tabulated.

Volatile Organic Compounds:

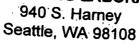
The holding time is 10 days calculated from Verified Time of Sample Receipt (VTSR). All samples were analyzed within holding time.

Semi-Volatile Organic Compounds:

The holding time to extraction is 5 days in water and 10 days in soil calculated from the VTSR. The holding time from extraction to analysis is 40 days. All samples were extracted and analyzed within holding time.

Pesticides/PCBs:

The holding time to extraction is 5 days in water and 10 days in soil calculated from the VTSR. The holding time from extraction to analysis is 40 days. All samples were extracted and analyzed within holding time.





Volatile Fraction:

All samples in this SDG were extracted and analyzed in accordance with EPA CLP OLM04.2 SOW.

Initial Calibration Standard Analyses:

Analyses of the initial calibration standards performed on 11/01/00 yielded RRF values for trichloroethene, 1,3-dichlorot azene and 1,4-dichlorobenzene which fell below the control limit. Up to two volatile compounds may fail to meet the minimum RRF or maximum %RSD requirements as long as these compounds have an RRF greater than or equal to 0.010 and the %RSD is less than or equal to 40.0%. These criteria were met for two of the compounds.

Analyses of the initial calibration standards performed on 08/23/00 yielded RRF values for benzene which fell below the control limit. Up to two volatile compounds may fail to meet the minimum RRF or maximum %RSD requirements as long as these compounds have an RRF greater than or equal to 0.010 and the %RSD is less than or equal to 40.0%. Since these criteria were met, the calibration is compliant and no corrective action was taken.

Continuing Calibration Analyses:

Analysis of the continuing calibration standard performed on 11/09/00 yielded minimum RRF values for 1,3-dichlorobenzene and 1,2,4-trichlorobenzene which fell below the control limit. Analysis of the continuing calibration standard performed on 11/16/00 yielded a minimum RRF value for benzene which fell below the control limit and a %D for bromofluorobenzene which exceeded the control limit. Up to two volatile compounds may fail to meet the minimum RRF or maximum percent difference criterion as long as these compounds have an RRF greater than or equal to 0.01 and a maximum %D of 40.0 percent. Since these criteria were met, the standard is compliant and no corrective action was taken.

Method Blank Analyses:

Analysis of the method blank performed on 11/09/00 resulted in the detection of methylene chloride above the detection limit but below the CRQL. Analysis of the method blank performed on 11/16/00 resulted in the detection of 1,2,4-trichlorobenzene above the detection limit but below the CRQL. Since these analytes were not detected above the CRQL, these blanks are compliant with the method criteria. All sample results reported for these analytes have been "B" flagged to denote their presence in the associated method blank analyses.

Sample Preservation:

The pH of all samples was measured subsequent to analysis in order to determine if they were preserved adequately. The pH values of all samples are tabulated below.

940 S. Harney Seattle, WA 98108



Client ID	<u>pH Value</u>	
C03S1	2	
C03S2	2	
C03S3	2	
C03S4	2	*
C03S5	2	
C03S6	2	
C03S7	2	T.

Tentatively Identified Compounds (TICs):

In accordance with the OLM04.2 SOW, 30 non-target organic compounds of greatest apparent concentrations are reported as TICs. Alkanes were library searched in addition to the 30 TICs. Alkane TICs were not detected in these samples.

Semi-Volatile Fraction:

Sample Analyses:

All samples in this SDG were extracted and analyzed in accordance with EPA CLP **OLM04.2 SOW.**

Tentatively Identified Compounds (TICs):

In accordance with the OLM04.2 SOW, 30 non-target organic compounds of greatest apparent concentrations are reported as TICs. Alkanes were library searched in addition to the 30 TICs. Alkane TICs were not detected in these samples.

MS/MSD Analyses:

The samples were extracted on the last day of holding time (on 11/13/00) just prior to receiving instructions from DynCorp to perform MS/MSD analyses which had not been requested on the COC. DynCorp was instructed that samples were extracted in hold and MS/MSD could not be performed within the holding time.

Pesticide/PCB Fraction:

MS/MSD Analyses:

The samples were extracted on the last day of holding time (on 11/13/00) just prior to receiving instructions from DynCorp to perform MS/MSD which had not been requested on the COC. DynCorp was instructed that samples were extracted in hold and MS/MSD could not be performed within the holding time.

There were no anomalies associated with these data.

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ORIGINAL (Red)

ABBREVIATIONS

Several abbreviations can appear in our reports. The most commonly employed abbreviations are as follows:

- U The analyte of interest was not detected to the limit of detection indicated.
- SDL Sample Detection Limit. The SDL can vary from sample to sample, depending on sample size, matrix interferences, moisture content and other sample-specific conditions.
- PQL Practical Quantitation Limit. The limit is drawn from the test method and usually represents the SDL multiplied by a matrix-specific factor.
- DB Dry Basis. The value reported has been back-calculated to normalize for the moisture content of the sample.
- AR As-Received. The value has not been normalized for moisture.

ORGANIC ANALYSES:

- When used in relation to organics fractions, the "B"flag indicates that the analyte of interest was detected in the method blank associated with the sample, as well as in the sample itself. The "B" flag is applied without regard to the relative concentrations detected in the blank and sample.
- J The analyte of interest was detected below the routine reporting limit. This value should be regarded as an estimate.
- The flagged values represent the SUM of two co-eluting compounds. The SUM of these two values is shown as though it were a result for each of them. The two figures should not be added together.
- The flagged value was reported from an analysis that exceeded the linear range of the instrument. See additional comments for further discussion of the circumstances. Values so flagged should be considered estimates.
- D The value reported derives from analysis of a diluted sample of the sample extract.
- P When a dual column GC technique is employed, this flag indicates that test results from the two columns differ by more than 25%. Generally, we report the higher value.
- C The flagged analyte has been confirmed by GC/MS analysis. The value reported may be derived from either the initial of confirmatory (GC/MS) analysis. See specific report comments for details.
- CRQL Client requested Quantitation Limit; usually the limit of detection specified at your request. Might also be referred to as Contract Required Quantitation Limit.

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RELEASE OF DATA

"I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or her designee, as verified by the following signature."

Respectfully submitted,

"non responsive based on revised scope:

Project Manager

1 Dec 2000

"non responsive based on revised scope:

Technical Director

<u>| Dec 2000</u> (DATE)

HOW TO CONTACT US:

All Laucks Testing Laboratories staff members can be reached at the same telephone and facsimile numbers: (206) 767-5060 by phone, (206) 767-5063 by FAX.

REQUESTS FOR DUPLICATE COPIES:

This packet has been checked for accuracy. All pages are present and in sequential order. Please see Attachment B for a detailed record.

In the event that duplicate data copies are needed, Laucks will accommodate your request at a fee of twenty-five cents (\$0.25) per copy, plus shipping. If the data are in storage, there will also be a fee for retrieval.

From:

"non responsive based on revised scope

To:

"Betty Ann Jeffery (E-mail)" <jeffery.betty@epamai...

Date:

11/9/00 1:24pm

Subject:

Region 3 / Case 28712 / LAUCKS / sample C03S4

11/09/2000 3:40 PM - Josie Smith, LAUCKS, reported that the lab received sample C03S4 for Case 28712 with 1 of 2 gallon jugs of sample broken. The lab still has enough sample volume to perform the requested analysis. Please advise. Thanks a lot.



CC:

"non responsive based on revised scope



From: .

To:

"Betty Ann Jeffery (E-mail)" <jeffery.betty@epamai...

Date:

11/10/00 10:43am

Subject:

Region 3 / Case 28712 / LAUCKS / lab QC issue

11/10/2000 12:10 PM -LAUCKS, reported by voice mail that for Case 28712, samples received on 11/08/2000, no MS/MSD was indicated on the TR/COC. The lab was scheduled for 8 water samples for full organic analysis. Sample C03S1 arrived with extra volume. Please advise. Thanks a lot.



CC:



'non responsive based on revised scope

From:

To:

Date: 11/13/00 6:06am

Subject: Region 3 / Case

Region 3 / Case 28712 / LAUCKS / lab QC issue - FINAL



Per Region 3, LAUCKS can select sample C03S1 for lab QC since the sample arrived with extra volume. Please document the issue in the case narrative. Thanks a lot.

Wes Markham

----Original Message----

From: Slizys.Dan@epamail.epa.gov [mailto:Slizys.Dan@epamail.epa.gov]

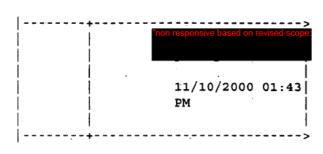
Sent: Monday, November 13, 2000 7:40 AM

To: "non responsive based on revised scope:

Subject: Re: Region 3 / Case 28712 / LAUCKS / lab QC issue



The lab can use sample C03S1 for QC and document issue in case narrative.



To: Betty Jeffery/ESC/R3/USEPA/US@EPA, Dan

Slizys/ESC/R3/USEPA/US@EPA, Khin-Cho Thaung/ESC/R3/USEPA/US@EPA

"non responsive based on revised scope

Subject: Region 3 / Case 28712 / LAUCKS / lab QC issue